

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

**(19) World Intellectual Property
Organization
International Bureau**



(43) International Publication Date
7 October 2004 (07.10.2004)

PCT

(10) International Publication Number
WO 2004/085253 A2

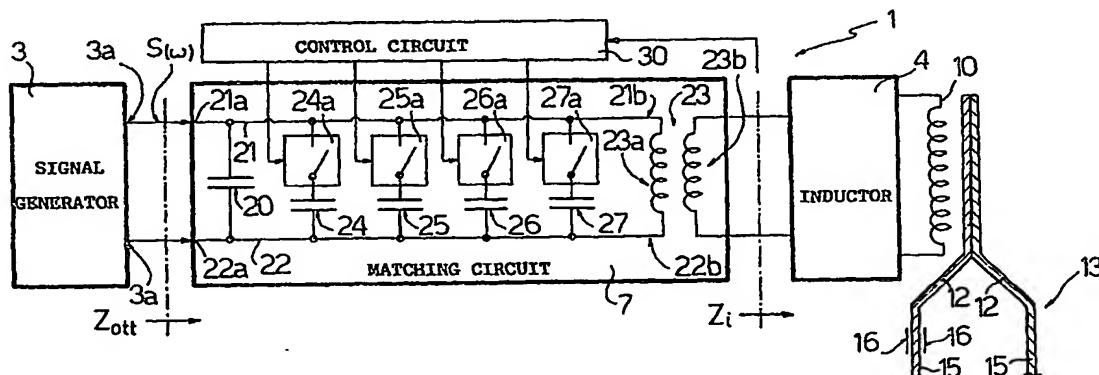
- (51) **International Patent Classification⁷:** **B65B**
- (21) **International Application Number:**
PCT/EP2004/050385
- (22) **International Filing Date:** 26 March 2004 (26.03.2004)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
TO2003A000238 28 March 2003 (28.03.2003) IT
- (71) **Applicant (for all designated States except US):** **TETRA LAVAL HOLDINGS & FINANCE SA** [CH/CH]; Avenue Général-Guisan, 70, CH-1009 Pully (CH).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **FERRARI, Claudio** [IT/IT]; Via A. Manzoni, 7, I-41042 Fiorano Modenese (IT). **MELANDRI, Antonio** [IT/IT]; Via Picasso, 2/1, I-42048 Rubiera (IT). **JAVED, Saquib** [PK/IT]; Via della Vite, 38, I-41100 Modena (IT). **GALAVOTTI, Gioglio** [IT/IT]; Via Gramsci, 61/B, I-41032 Concordia (IT).
- (74) **Agents:** **JORIO, Paolo** et al.; Studio Torta S.r.l., Via Viotti, 9, I-10121 Torino (IT).
- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

Published:

- *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: INDUCTION SEALING DEVICE AND METHOD WHICH MAY BE USED FOR PRODUCING PACKAGES OF POURABLE FOOD PRODUCTS



(57) Abstract: An induction sealing device which may be used for producing packages of pourable food products by transversely sealing a tube (13) of sheet packaging material having at least one layer (12) of inductionheatable material covered with plastic material (16). The sealing device has: a generator (3) for generating an alternating power signal $S(\omega)$; an inductor (4) receiving the alternating power signal $S(\omega)$ to induce a parasitic electric current in the layer (12) and locally melt the plastic material (16) to form a transverse seal; and a matching circuit (7) for achieving optimum power transfer between the generator (3) and the inductor (4). The matching circuit (7) includes an inductive -capacitive circuit, in which the capacitance of a variablecapacitance capacitive element (20, 24, 25, 26, 27) is adjustable so that the current-voltage phase angle is close to zero.

WO 2004/085253 A2